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ABSTRACT

This literature review focuses on geography instruction and summarizes the most important information teachers should know. The review suggests that there are four main areas of concern in geographic education: defining geography; developing systematic, sequential curriculum; training geographically literate teachers; and developing tests that test more than memory recall. Other themes are noted, including the following: geography has been arranged into five interactive themes; geography has outcomes that foster the development of responsible citizens; geography curriculum must be developed so that children begin to learn geography skills earlier in their education; later schooling activities will expand and build upon these skills; geography is an integral part of all social studies curricula; geography needs to be integrated throughout other areas of study such as reading and mathematics; and teachers need geographic preparation before they begin teaching and continued district support through in-service activities during their teaching careers. A 20-item list of references is included. (DB)

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Reforming Geography Education: What Research Says to Teachers About Geography Instruction

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The value of geographic literacy in terms of a sound general education cannot be underestimated. The impact of geographic education in developing well-rounded citizens with a sense of civic responsibility is vital. It is the teacher's responsibility to increase geographic literacy for all of his students. In Thornton's (1989) study it was the teacher who actually determined the curriculum students were actually taught

Geographic literacy is the development of a global perspective which includes political interaction, economic interaction, and social interaction (Stoltman, 1990.) Another concept of geography includes such ideas as cultural geography, regional geography, spatial geography, and historical geography (Baker, 1989.) All students need to know several kinds of geography in terms of people, places, and events. A well thought-out curriculum develops geographic education interms of human interaction, not just place memorization. The teaching of geography has long been associated with the teaching of other social sciences, particulaily, history (Stoltman, 1988.) It is generally recognized that geography as a distinct course of study is sometimes impossible given the constraints of time and course-load in today's curriculum. Integrating geography with other areas is one possible solution.

so that continuity from grade-to-grade does not exist. It may be possible that geographic education does not begin sufficiently early in school– possibly in the pre-kindergarten program. Teachers who need to teach geographic concepts have been ill-prepared for the task. They have not had college course-work. What teachers do not themselves understand will receive a low priority and therefore will not be taught. There may be some monetary constraints which do not adequately fund geographic materials. Teachers need quality in-service preparation to teach a multi-faceted geography curriculum. Geography needs vocal leaders or spokesmen at the state education or university level to initiate a strong geography focus.

In a study conducted by Allen (1990), the respondents correctly answered fifty-seven percent of the items on a test of place names. These low scores may be connected with an inadequate integration of geographic skills in the school curriculum. Ben Smith (1986) found that there was a high correlation between those students who received instruction in geographic vocabulary and test performance. George F. Will, in his commentary of Sunday, June 2, 1991, noted, among other statistics, that less than fifty percent of students can locate New York on an unlabeled map. Too much emphasis seems to be placed on memorizing facts. Teachers need to test children on geographic skills and the tools of geography (Stoltman, 1990.)

There is a discrepancy between what the curriculum states is to be taught and what is actually taught. Furthermore, there is too much reliance placed on memory recall testing. Clearly, students are not being given the well-rounded geographic education to which they are entitled.

This discrepancy may be traced to many factors related to school curriculum and teacher preparation. Although opportunities for the integration of geography with other social sciences exist, little integration has been meaningfully developed. Integration between geography and other subject areas, especially language arts, is just beginning. The study of geography has been fragmented

One major concern to educators is the definition of geography. To geographers, it is generally accepted to have five fundamental themes. These themes were developed by the Joint Committee on Geographic Education (1984). These five themes are: location, place, human-environmental interaction, movement, and region. These themes are interactive and have a specific set of learning outcomes for each theme.

However, to the general public, geography is considered to be fact recall. Many teachers see geography as a set of map skills to be taught, but not necessarily integrated with other social sciences or other subject areas (Thornton, 1989.) The perceptions of the public and of some teachers are possible reasons for the over-abundance of media coverage of test scores (Will, 1991.)

In addition to the five fundamental themes which form a conceptual foundation for geographic literacy, there are other theories as to what geography can be. In his 1988 study, Bein discussed four areas of geographic literacy: map skills, name/location, physical geography, and human geography. These four areas correspond well to the five fundamental themes of geography. In 1989, Lyman's discussion of geography focused on two other aspects: social interaction and group participation. These two are

themes of geography, he added some concepts of his own: cultural geography, regional geography, spatial geography, and historical geography. Reviewing the five themes also served as an introduction for Stoltman's (1988) article. Baker expands upon these concepts by introducing the theory of global interdependence. Global interdependence is exampled by the interrelatedness of peoples and countries. Clarke (1990) has also explored the necessity for a global education as part of the geography curriculum.

Several authors, including Stoltman (1990), have begun their articles by addressing the five themes of geography. He considers geographic education from the aspect of good citizenship. Citizenship concepts are much more likely to be understood when taught in the context of geography education. The better a student understands the five themes, the better citizen he/she will be. By developing a world perspective, a student's citizenship attitudes will be increased. Stoltman speaks of geography as having political interactions, economic interactions, and social interactions. Stoltman reviews the geographic education syllabus for each state. He concludes with learning opportunities for students using geographic education. These learning opportunities include: decision-making skills, judgement-making skills, communicating skills, cooperating skills, and critical thinking skills.

especially important when considering that good geographic education assists students in becoming well-rounded citizens with a sense of civic responsibility. Stoltman (1990) found that citizenship skills were enhanced when taught in a geographical context.

There are other definitions of geography. Farrell (1989) categorizes geography into three main groups: geographic skills, human geography, and physical geography. His groupings coincide with the four categories developed by Allen (1990): knowing location, mapping skills, cultural geography, and physical geography. His survey of teachers found that teachers rated the teaching of global interdependence as their highest priority. The teaching of physical geography concepts had the lowest priority.

Geographic literacy involves the five themes (or Bein's four groups) as well as Lyman's behavioral concepts. Additionally, good geographic education is related to other subject areas. It develops skills which can enhance a student's educational program and will be used in everyday life. Gerber (1988) states that knowledge, values, and skills are one's personal geography and should be part of the geography curriculum, perhaps titled "geography for living."

Several areas of geographic education were discussed by Baker (1989). After reviewing the five fundamental

Another major concern in geographic education is the development of a sequentially planned, educationally sound curriculum. There are many areas in the field of geographic curriculum development which studies have addressed. Geographic education is definitely part of the social studies curriculum. There is also a growing trend toward incorporating geographic skills in other subject areas.

In a study of social studies curriculums, Stoltman (1988) concluded that geography must be part of the history curriculum. In order to understand timing of events, students need to understand that events happen in places. The integration of geography and history offers the teacher the opportunity to go beyond mere fact recall and introduce critical thinking skills. This view is also shared by Gerber (1988). Such critical thinking skills may combine the theme of environment with cause and effect. Critical thinking skills combine a discussion of continuity and change with the theme of movement. It could also involve political implications of regions and cultural diversity.

The integration of geography with other subject areas such as literature, creative writing, science, and mathematics was explored by several authors. Clarke's (1990) study of Canadian geographic curriculum found that geographic understandings, especially the study of human interaction and group participation, were enhanced when geographic

teaching was integrated with literature. Children need to develop an understanding and appreciation of physical and cultural environments. The combination of geography and literature build on one another so that children can understand social organizations, cultural differences, needs and resources, and future events.

In a study by Dowd (1990), a reiteration of the necessity of introducing teachers to the five fundamental themes of geography was found to be important to teaching geographic skills. Dowd found that although most teachers are comfortable teaching math and reading, they are less equipped to teach geography. Coupling literature with geographic education is one way of insuring that geographic skills become part of the daily routine. Other language skills such as writing, speaking, organizing and collecting data, for example, may be integrated with geographic education. Folktales from foreign lands offer a wealth of geographic information which can readily be utilized by the classroom teacher. Comparing/contrasting (higher level thinking skills) replace fact recall in these geography activities.

One goal in increasing geographic literacy according to Hudson (1987) is to develop links between geography and literature. Too often, classrooms devote too much time to teaching about strange places and neglect the familiar environment. Books can also stimulate students to build

greater geographic awareness by awakening an interest in maps and globes. This view was shared by Gerber (1988).

Parker (1989) argues for a forcefully written mission statement by school districts. This mission statement must make administrators and teachers alike realize the importance of quality geographic education. A K-12 curriculum needs to be developed which is not arbitrary and is sequentially structured. Units of study must allow teachers to spend more time on less material. Children need to explore concepts in greater depth. Children need to be challenged. Thornton (1989) found that teachers thought they had too much to teach and that students were not learning the material taught.

In a study concerning early childhood education and geographic literacy, Cohen (1986) found that young children are able to work cooperatively to draw maps and verbalize about relative positions and relationships. Young children need to relate their beginning map skills to their own environment. They need to explore spatial relationships. Gerber (1988) stresses the teaching of map skills as part of vocabulary development. The use of language assists children in forming concrete understandings of their environment. A conclusion reached is that children are more able to learn abstract skills much earlier than was previously thought. Miller (1985) agreed that most

Americans, including teachers, underestimate what children are capable of learning. The key is to provide highly structured, sequential activities in which children are active participants. Map skills should be introduced when children are conceptually ready. Miller is the only author who concludes by saying that " the fun of maps should be shared with students by teachers."

Gerber (1988) ends his article with a plea for more in-service education for teachers. Such in-service would give training, maintainence of skills, increased expertise, and ENTHUSIASM (emphasis is mine,) Miller (1985), as noted, would agree: he suggests teachers share the fun of maps with students. Cohen (1986) has a great deal in common with Gerber. Both suggest that geography skills and concepts be related to other subject areas. They both think that map reading skills should be taught early in school. Finally, both think mapping skills should be taught sequentially: moving from the familiar to the unfamiliar and from the simple to the concrete. In developing a coherent geography curriculum, Gerber stresses many things. Children need practical activities in which they practice observing, recording, and reporting data. Students need to remember, plan, organize, and monitor their own progress. Learning activities should be student-centered. These findings agree with those of Lyman (1989) whose study on the positive

effects of using cooperative education to teach geographic skills will be discussed next.

Currently, one popular teaching strategy is to introduce cooperative learning into the classroom. Lyman's (1989) study has shown that cooperative learning was an excellent method of building student interaction, building group skills, increasing social interaction, and enhancing group participation. Cooperative learning has been shown to greatly assist students in mastering geography skills. This study compares well with Gerber's (1988) study in which attitudes and values as well as participation were considered strong outcomes of geographic education.

Much has been written about the test scores of American children. Will (1991) reported that sixty-three percent of students cannot locate France on an unlabeled map. Will was writing about education trends in general. However, Will, like many reporters, was reporting an incomplete picture. As has been noted, geography is interpreted to be more than location recall. Stoltman (1990) urges that children be tested in their ability to use geographic skills and the tools of geography. Baker (1990) found that tests were developed around narrowly focused sets of knowledge. Smith's (1986) study on teaching styles was based on the teaching of geographic vocabulary only. Other facets of geographic education: mapping skills, human geography, and physical

geography were not considered.

In a study comparing teaching methods, Smith (1986) compares two groups of students. The control group was taught by traditional rote methods. The experimental group was taught geographic place/name vocabulary by "varied methods." These methods included cooperative learning, geography bees, puzzles, freehand maps, and webbing (categorizing.) Smith concludes that drill instruction seems the best way to teach place/name vocabulary. However, he did not consider the social interaction and group building skills which cooperative education might enhance.

One study which did more than test knowledge recall was Bein's study in 1988. Students were tested in four areas: map skills, name location, physical geography, and human geography. Students scored best in the area of name location. Most students have traditionally been tested in this sub-group. Scores were sorted according to age, sex, and ethnicity. Women scored lower than men. This scoring difference was also found by Miller (1985) who concluded that women tend to score lower due to cultural differences and a an "impared ability to cope with maps, drawings, and other spatial relationships."

In another study, only fifty-seven percent of the students answered test items correctly, These students were tested in knowing location, mapping skills, cultural geography, and physical geography. Allen (1990) concluded

that the fault may lie with the school curriculum. Students who studied geography in a U.S. history course did better on the test. Here, geography was taught in the context of another social science.

Although curriculum concerns are important to increasing geographic literacy, the role of the teacher cannot be underestimated. As an introduction to his 1990 study, Thornton reviews the five fundamental themes for the reader. He then examines the kind of geography instruction students are given. One kind of instruction emphasizes facts; the other kind stresses relationships. Gerber (1988) states that students not only need to know where (fact) but why (relationship.) Thornton conducted his study by using classroom observations, interviews of teachers and students, and a teacher survey. The survey was included in the article.

Thornton found that teachers did not perceive geography as a priority. Although geography was an important part of the social studies curriculum, teachers stressed skills over relationships. Few of these teachers had had a geography course. The National Council for the Social Studies [NCSS] (1988) found that less than forty-four percent of teachers were required to complete course-work in order to be certified. Social studies class periods tend to be shorter in length and scheduled at the end of the day. The NCSS

found class periods to be only twenty-nine minutes in length. Classroom treatment tended to be a recitation of facts. Important opportunities for making inferences and cultural comparisons were lost. As students progress to higher grades, there is increased pressure to memorize low-level facts. Thornton (1989) found that the basic concepts of geography were misunderstood.

Farrell (1989) repeats what several authors, notably Thornton (1989) have found: that teachers play an important role in the development, implementation, and maintainence of geography curriculum. Farrell also reports that teachers feel they have a good perception of geography's role in the curriculum. This finding disagrees with Thornton (1989) who found that teacher's own perceptions of geography were self-limiting. Both Thornton (1989) and Baker (1989) would agree that in-service education must be geared to concepts and sub-fields of geography which teachers consider to be important.

In another study, Thornton (1990) undertook to examine teaching methods and content related to geographic education. Teachers who were interviewed expressed opinions that there was too much to teach and students were unlikely to learn many geographic concepts. They tended to emphasize skills with little application to other parts of the curriculum or to real world activities. Clarke (1990) suggests that

children are not being taught a global perspective. They need to learn about foreign cultures, the physical environment, and natural conditions. Relying on mapping skills with no context does not foster geographic literacy. Gerber (1988) states that practical activities and student understandings are linked. Many teachers felt unsure about teaching geography. They felt secure in teaching math and reading because they were better prepared for it. Teachers also need quality in-service to increase their own geographic understandings. Dowd (1990) concluded that teachers believe they are less prepared to teach geography than math or reading.

In the area of teacher preparation, Baker (1989) found that many teachers were not prepared to teach geography. Dowd (1990) would agree with him. Like Dowd, Baker says that teachers are better prepared to teach math or reading. He adds that many teachers find geography confusing because it cuts across so many other disciplines. He continues by saying that geographic literacy is more than place memorization and that too many tests rely on this method of assessing knowledge.

A review of the literature suggests that there are four main areas of concern in geographic education:

1. defining geography
2. developing systematic, sequential curriculum
3. training geographically literate teachers
4. developing tests which test more than memory recall

Geography has been arranged into five interactive themes. Geography also has outcomes which foster the development of responsible citizens. Georgaphy curriculum must be developed so that children begin to learn geography skills earlier in their education. Later schooling activities will expand and build upon these skills. Geography is an integral part of all social studies curriculum. Geography needs to be integrated throughout other areas of study such as reading and math. Lastly, teachers need geographic preparation before they begin teaching and continued district support through in-service activities while pursuing their teaching careers.

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